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ABSTRACT

This report summarizes the accomplishments and activities of the project during the second quarter. An intensive search of the literature continued for data elements, outcome measures, and background information. A great deal of time and effort were devoted to the location, compilation, and comparison of extant data elements employed in collecting today's library statistics and to the preparation of two draft documents providing the structural framework for the Library Statistical Data Base. The selection of members for the national advisory board was completed and the first meeting scheduled to take place in Washington, D.C. on February 5, 1977. The possibility of testing the system in selected Oklahoma public libraries is being investigated. Additionally, inquiries have been made regarding participation of the Reference Section, Statistical Coordinating Committee of the ALA. The financial report indicated that expenditures are essentially on target. (Author/AP)

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Second Quarterly Report

Project No. 475AH60139
Grant No. G007603529

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# DEVELOPMENT AND DEMONSTRATION OF A STATISTICAL DATA BASE SYSTEM FOR LIBRARY AND NETWORK PLANNING AND EVALUATION

January 1977

U. S. Department of Health, Education, and Welfare

Office of Education
Office of Libraries and Learning Resources



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SECOND QUARTERLY REPORT

Project No. 475AH60139

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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Office of Libraries and Learning Resources

4

USOE QUARTERLY REPORT

For the Period
November 1, 1976 to January 31, 1977

TABLE OF CONTENTS


ABSTRACT . . . . . i
ACKNOWLEDGMENTS. . . . . iv
DEFINITIONS OF TERMS AND ACRONYMS. . . . . v

I. INTRODUCTION . . . . . 1

II. THE PROBLEM. . . . . 1

III. GOALS. . . . . 1

IV. OBJECTIVES . . . . . 2

V. MAJOR ACTIVITIES AND ACCOMPLISHMENTS . . . . . 2

A. Project Management . . . . . 2
B. CASC Meeting . . . . . 3
C. Advisory Board . . . . . 4
D. Bibliography . . . . . 5

VI. PROBLEMS . . . . . 6

VII. SIGNIFICANT FINDINGS AND EVENTS. . . . . 6

(1) Library Statistical Data Base Framework. . . . . 6
(2) Test Sites for Academic and Public Libraries . . . . 16

VIII. RELATED ACTIVITIES . . . . . 17

A. Site Visit . . . . . 17
B. Reference Statistics Study . . . . . 18

IX. DISSEMINATION ACTIVITIES . . . . . 19

X. STAFF UTILIZATION. . . . . 19

XI. ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD . . . . . 19

XII. FINANCIAL REPORT . . . . . 20

APPENDIX A: BIBLIOGRAPHY . . . . . 21
APPENDIX B: SITE VISIT. . . . . 29
APPENDIX C: NCHEMS PROGRAM CLASSIFICATION STRUCTURE. . . . 31
APPENDIX D: FINANCIAL REPORT. . . . . 35
APPENDIX E. DISTRIBUTION LIST . . . . . 37

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## DEFINITIONS OF TERMS AND ACRONYMS

ALA--American Library Association

ARL--Association of Research Libraries

DATA BASE SYSTEM--A structural means for collecting, organizing, retrieving, disseminating, and interrelating those data elements identified as being critical for library planning and management.

DATE ELEMENT--For the purposes of this project a DATA ELEMENT will be defined as a generic term used to describe the components and subcomponents: Program Categories, Subcategories, Sectors, and Program Elements making up the NCHEMS Program Classification Structure.

HEGIS--Higher Education General Information Survey prepared by NCES.

IEP--INFORMATION EXCHANGE PROCEDURES--"The Information Exchange Procedures (IEP) developed by the National Center for Higher Education Management Systems (NCHEMS) are a set of standard definitions and procedures for collecting information about disciplines and student degree programs, outcomes of instructional programs, and general institutional characteristics. These definitions and procedures have been developed to facilitate exchange of information among institutions of postsecondary education, providing institutions with some assurance that data they exchange are useful for purposes and comparisons." (NCHEMS, Technical Report 64, February 1975)

LIBGIS--Library General Information Survey prepared by the National Center for Educational Statistics.

NCES--National Center for Education Statistics, Office of the Assistant Secretary for Education.

NCHEMS--National Center for Higher Education Management Systems at WICHE.

OUTCOME MEASURES--Indicate the outcomes or products generated as a result of the activities of the program element. (Topping, NCHEMS, Technical Report 35, Rebruary 1973)

OUTCOMES--Results and impacts.

PCS--PROGRAM CLASSIFICATION STRUCTURE--The following terms are utilized by NCHEMS to describe the Program Classification Structure:

| | | |
|---|---|---|
| Program | Program Subcategory | Program Measures |
| Subprogram | Program Sector | |
| Program Category | Program Element | |

APPENDIX C and TABLES I, II. and III provide illustrations of the PCS framework.

USOE--United States Office of Education

WICHE--Western Interstate Commission for Higher Education

WILCO--Western Interstate Library Coordinating Organization.

## I. INTRODUCTION

The Western Interstate Commission for Higher Education (WICHE) was awarded Grant No. G007603529 by the United States Office of Education to develop and demonstrate a statistical data base system for library decision makers to be supported by the ten western states who are members of the Western Interstate Library Coordinating Organization (WILCO). The project began on July 1, 1976. The project is intended to improve resource allocation decision making through identification, definition, compilation and structuring of program elements and outcome measures. The data base structure organizes data, and standardizes definitions, for internal management, comparative study, and state and federal requirements.

## II. THE PROBLEM

Library decision makers are constantly faced with the formidable task of maintaining or extending library services in the face of every rising cost and demand for new services. In complex library structures, decisions regarding a variety of alternatives in the allocation of financial, personnel, space, and material resources must be made, knowing that any decision regarding one resource allocation will influence activities related to all other resources and activities.

The library statistics collected today neither provide the necessary information nor do they provide a structure for evaluating information which would result in appropriate decisions on resource allocation, optimum productivity, evaluation of the impact of changing library environments or alternatives in service. A new and improved statistical system is required which will meet the needs of library decision makers.

## III. GOALS

The initial task of this project was the translation of the broad, general goals and objectives stated in the original proposal into specific goals and objectives attainable during a twelve-month time frame. The project was realistically viewed as requiring at least two phases. Phase I was restricted to design and preliminary testing, and Phase II the elaboration and testing of the design.

The long-term goal of the project is the improvement of resource allocation decision making by providing the information necessary to support a decision. The immediate goals of the current year are the identification, definition, compilation, and structuring of Program Elements and Outcome Measures which provide the information in the aforementioned long-term goal. The successful conclusion of the immediate goals will logically terminate in the development of a system for comparison of these elements with dynamic Program Measures resulting in invaluable assistance for library decision makers.

## IV. OBJECTIVES

The attainment of the following objectives provides direction for the entire project.

OBJECTIVE 1. To design cooperatively and develop a Statistical Data Base System employing the existing library subprogram of the NCHEMS Program Classification Structure. (APPENDIX C)

OBJECTIVE 2. To modify and supplement the Program Subcategories with Program Elements from other sources.

OBJECTIVE 3. To select two Program Categories to be analyzed through the Program Element level for subsequent testing.

OBJECTIVE 4. To define clearly, standardize, and compile Outcome Measures.

OBJECTIVE 5. To identify the statistical analyses which will permit comparison or combination of data elements resulting in workable Outcomes for library decision makers.

OBJECTIVE 6. To identify existing computer programs or develop new computer programs designed to accomplish Objective 5.

OBJECTIVE 7. To devise a plan of implementation and further study.

## V. MAJOR ACTIVITIES AND ACCOMPLISHMENTS DURING THE PERIOD NOVEMBER 1, 1976 THROUGH JANUARY 31, 1977.

### A. Project Management

During the second quarter, Eleanor Montague left WICHE to accept the library directorship of the University of California at Riverside. Dennis Jones of the National Center for Higher Education Management Systems (NCHEMS) has assumed the role of Project Director. Since Mr. Jones has been assigned to this project since its inception, no staffing changes have been incurred. The transfer of responsibility has been approved by the WILCO, NCHEMS and WICHE boards, along with the U. S. Office of Education.

B. Council for the Advancement of Small Colleges Meeting

The Council for the Advancement of Small Colleges (CASC) has been awarded a grant to finance the first phase of a series of studies on four hundred small, private liberal arts colleges in the United States. The Research and Management Project Task Force Chairman, Willis M. Hubbard, Librarian and Director of Institutional Research and Planning at Eureka College, Eureka, Illinois, met with the Statistical Data Base Project staff on December 13, 1976. The Library Task Force of CASC is collecting data from these small college libraries for the purpose of obtaining median distributions of library budgets, salaries and wages, library materials, and other library data. This nation-wide collection of data was undertaken for the dual purposes of providing (1) operational or inventory data for national reporting purposes, and (2) analytic data for management purposes. Once collected, this data can be used to gain a picture of productivity (output) in terms of resources consumed (input).

Participating small colleges were asked to supplement data collected on HEGIS forms and already in the public domain. The Task Force accessed HEGIS data for those colleges cooperating in the study.

During the development and testing of the library module of this study, the HEGIS data categories and definitions were adhered to whenever possible. The survey instruments also attempted to collect vital informational categories essential for library decision makers which had been omitted from the HEGIS questionnaire.

CASC approached the question of library staffing from the perspective of small academic libraries. A concept created by the NCHEMS staff, servicemonths, was employed in lieu of full-time equivalencies (F.T.E.'s) in this study. Library personnel were divided into professional staff and supporting staff. Operational functions were perceived as falling into three broad areas: (1) Administration, (2) General Support Operations [traditionally, Technical Services], and (3) General Production Operations [traditionally, Public Services].

Among the most pertinent outcomes of the study for the Statistical Data Base Project was the thorough evaluation of the HEGIS library taxonomy, especially regarding the appropriateness of the HEGIS taxonomy to small academic settings. The evaluation isolated some of the concerns related to the HEGIS (LIBGIS) forms. Full credit for the following comments on the forms is extended to the task force.

HOLDINGS (questions 2-8): Generally there is no way to obtain total figures either for additions or holdings.

- Books and Bound Periodicals: The combined counts of titles and volumes for these two distinct areas may lead

to faulty data. For example, a book title represents a far different value from a periodical title which can represent numerous volumes,

- Periodical Titles Represented by Microforms: Units would appear to be more relevant, given that some titles represent hundreds of reels, while otners may represent simply one. Further, there can be an obvious possibility of double counting between Bound Periodical Titles and Microform Titles, when titles are still currently received.

- Microform Units: A change in the data element employed from other microform questions; there is no basis for combination, or thus, a measure of comparison.

- Other Library Materials: Titles counted, thereby mixing volume and title statistics.

SALARY INFORMATION (questions 11-17): Instructions indicate that "A salary paid on other than an 11-12 month basis, should be converted to the equivalent 11-12 month salary." This measure reveals salary rates, but obscures actual salary costs by category of employee.

TRANSACTIONS: Does not indicate where reserve and internal circulation are included.

The overall concensus appeared to be that HEGIS (LIBGIS) provide inadequate information for planning and management.

Mr. Hubbard assured the Statistical Data Base staff that he would assist the project within his time constraints by providing information on the organization of his data and further by contributing the data gathered on existing gaps in library statistics data as they are collected today.

C. Advisory Board

These individuals have been invited and have agreed to serve as advisors to the Statistical Data Base project staff. The board is now complete. In order to improve the substance of the project and to achieve broader acceptance of the final products, we intend to invite other outstanding members of the library profession to assist the advisory board in the review and evaluation of the project from time to time.

Robert Burns, Librarian for Research and Development, Colorado State University, Fort Collins

Ronald Dubberly, City Librarian, Seattle, Washington

Katherine Emerson, Archivist, University of Massachusetts, Amherst

Anne Marie Falsone, Deputy State Librarian, Colorado State Library, Denver

Harold Olsen, Associate Librarian, Oberlin College, Oberlin, Ohio

Vernon Palmour, Library Consultant, Vienna, Virginia

Frank Schick, National Center for Education Statistics, Education Division, Washington

Donald Simpson, Director, Bibliographical Center for Research, Denver

Barbara Slanker, American Library Association, Office of Research, Chicago

Duane Webster, Association of Research Libraries, Washington.

The advisory board will meet on February 5, 1977, in Washington, D.C. Dr. Scott Bruntjen of Shippensburg State College Library, Shippensburg, Pennsylvania and Willis Hubbard, CASC, have accepted invitations to participate in the first meeting of the board.

D. Bibliography

A very substantial bibliography (APPENDIX A) pertaining to the project has been compiled. Many texts and articles were read not only in search of Data Elements, Performance Measures, and Outcome Measures but also to provide a sound foundation in regard to work already completed in areas related to the Statistical Data Base project. Each text and each new article generated additional material which the staff felt should be examined. Consequently, the bibliography is viewed as an on-going project with an exceptionally fine end product contemplated. The citations in the text of this report are included in the bibliography for the sake of convenience.

## VI. PROBLEMS

This section might well contain the word none, for no significant problems were encountered other than those the staff was cautioned to expect. During both the visits of Larry Papier, Program Officer, and Willis Hubbard, representing CASC, Dennis Jones of NCHEMS warned of the difficulty in determining Outcome Measures. Employing the definition taken from NCHEMS Technical Report 35, describing Outcome Measures as "quantitatively expressing the outcomes achieved or the products generated by the activities of a program element during a stated time period"[1], an intensive search of the literature is continuing in an attempt to locate and identify extant Outcome Measures.

It was also expected that problems would arise in the development and assignment of standard definitions for library terms. It is anticipated that the advisory board will offer guidance and assistance in the standardization of these terms. As projected, the composite Dictionary of Data Elements and Standard Definitions of Terms is well into the process of being developed and will remain part of the project as an on-going activity.

## VII. SIGNIFICANT FINDINGS AND EVENTS

The project staff views the following findings and events as the most significant during the second quarter of the project: (1) the production of two draft documents providing the structural framework for the Library Statistical Data Base--the first, Library Statistical Data Base Formats and Definitions and second, its companion piece, Library Statistical Data Base Commentary; (2) the prospect of an Oklahoma test site for public libraries; and (3) the submission of the proposal by Shippensburg State College to evaluate phase one of this project.

### (1) The Library Statistical Data Base Framework.

In arriving at a conceptual approach to the development of the statistical data base, the overriding concerns were the uses to which the data base would be put and the logical areas of information to be included. The uses of the data base encompass these general categories: (1) reporting to other agencies or groups, (2) comparing information among libraries, and (3) internal planning and management. Reporting to other agencies would not take the form of utilizing the entire data base, but rather sets of information can be taken from the data base, for example, by HEGIS/LIBGIS.

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[1] James R. Topping and Glenn K. Miuataki, Program Measures, Technical Report 35 (Boulder, Colorado: NCHEMS, February 1973), p. 32.

A second potential use is one of comparison. A library may want to compare itself to similar libraries. Presumably this would be beneficial to compare information about the total operation of a library or only single segments. For example, the comparison of interlibrary loan activities among several libraries allows libraries to draw upon successful activities of one library in order to upgrade or innovate their own interlibrary loan programs.

The third and most important use of the data base is to assist planners and administrators with internal planning and management decisions. It is in this area that the most promise for benefit to the individual library can be demonstrated and that argues persuasively for the broad implementation of the data base.

With these uses as a guide in the development of the information base, a discussion of the "pieces" or general areas of the information base is necessary. NCHEMS has developed two major documents which serve as a foundation for the conceptual approach to the formulation of the data base components. These are the Program Measures, Technical Report 35 and Program Classification Structure, Technical Report 101.

The components of the data base become more clear if we reflect on the types of questions a manager might expect to have answered. The following are basic questions which might be asked:

- What are the sources of library funding?

  How much is received?
  How are these funds utilized?

- What human and material resources do I have at my disposal?

- What facilities and space do I have at my disposal?

- What major activities do I have?

- What kinds of people utilize my services, i.e., what are the target groups for my program?

- What are the basic characteristics that describe my organization?

- How do my outcomes compare to my organizational goals?

When looking at only a few broad questions such as these, it is possible to organize the data into the following seven, basic categories to provide the answers.

- Organizational Characteristics
- Revenues
- Personnel
- Facilities
- Activity Levels
- User Groups
- Outcomes

These categories serve as the basis for organizing the information set.

However, describing a total library using only these seven sections is not adequate for the manager. It is not adequate because the operations of a library are broken into specific and separate functional areas. The funcational areas refer to distinct, unique programmatic activities that occur within a library. It is when the data categories are compared to these programmatic areas that information leads to sound decision making.

The categories of programmatic activities of libraries are somewhat difficult to arrive at because they relate so much to the level of sophistication already present or desired within a particular library. Initially, NCHEMS is recommending the following categorization of programmatic activities or functions:

- Administrative Services
- User Services
- Technical/Production Services
- Instructional Services
- Support Services

There may be individual libraries who wish to be more selective in the level of detail for these programmatic activities. TABLE I is an attempt to provide options for the level of detail libraries might use in reporting data. Level 1 is the level of detail used for programmatic activities in the Statistical Data Base documents under discussion. Level 2 is slightly more selective and is consistent with the functional categories used in the Program Classification Structure. Thus, Level 2 may be very appropriate for use by a library which is part of an academic institution. Finally, Level 3 is the level at which a library may be most discriminating. In many ways this categorization parallels departmental lines within a large library, but for that reason, may most appropriately, be limited only to large libraries.

## LEVELS OF PROGRAMMATIC ACTIVITIES

| LEVEL 1 | LEVEL 2 | LEVEL 3 |
|---|---|---|
| Administrative Services | General Administrative Activities | General Administration<br>Personnel Administration<br>Public Relations<br>Budgeting<br>Building Supervision<br>Advertising and Exhibits<br>Publications |
| User Services | Materials Distribution<br>Materials Identification and Access<br>Inter-institutional Exchange and Loan Services | Messenger Services<br>Interlibrary Loan Office<br>Circulation Services<br>Reserve Services<br>Equipment Loan and Rental Services<br>Information Services<br>Media Services |
| Technical/Production Services | Materials Acquisition<br>Materials Preparation | Acquisition Services<br>Cataloging<br>Periodicals Control<br>Binding and Repair Services |
| Support Services | General Support Activities | Utilities<br>Maintenance and Repair<br>Custodial Services<br>Construction Planning |
| Instructional Services | General Instructional Activites | Instructional Programs (Adult or Continuing Education) |

This then is the basic conceptual structure upon which the NCHEMS Libraries Subprogram is being constructed. Asking basic questions led us to develop categories of information. The desire for more useful information led us to divide library activities into programmatic activity categories graphically presented in TABLE II.

Thus, we have a conceptual structure through which we can develop data elements that are part of a statistical data base. Each of these data elements is part of an information set which allows a manager to make better planning and management decisions, exchange data with other libraries, and report data to governmental entities or other agencies.

TABLE II
CONCEPTUAL REPRESENTATION OF DATA BASE

(DATA ABOUT A LIBRARY)

General Characteristics of Library:

| Program Measures / Programmatic Activities (Functions) | Revenue Measures | Personnel Measures | Facilities Measures | Activity Measures | User Measures | Outcome Measures |
|---|---|---|---|---|---|---|
| Administrative Services | | | | | | |
| User Services | | | | | | |
| Technical/ Production Services | | | | | | |
| Instructional Services | | | | | | |
| Support Services | | | | | | |

Currently two of the primary collectors of library data are the National Center for Education Statistics (NCES) through its HEGIS surveys and the U. S. Office of Education (USOE) through its LIBGIS surveys. As has been noted, reporting, specifically federal reporting is a potential use of the statistical data base. HEGIS/LIBGIS as well as other major collection efforts have provided a beginning point to guide our staff in data base development. Where possible, existing definitions and categorizations have been included. The prime goals of our staff were to cover a broad spectrum of information, provide compatible and comparable definitions, and provide for the linking of one section of information to that information in another section.

TABLE III was developed to describe the kinds of information found in this data base compared with other major data collection efforts. This is not intended to be a complete display of all efforts, but rather to be illustrative of the scope of the data base in relation to existing collection efforts. The data collectors compared are HEGIS and LIBGIS--library data collected by the National Center for Education Statistics and the Association of Research Libraries (ARL).

TABLE III

CURRENT DATA COLLECTOR'S COMPONENTS

Organizational Characteristics: HEGIS, LIBGIS

| Program Measures / Programmatic Activities (Functions) | Revenue Measures | | Personnel Measures | Facilities Measures | Activity Measures | User Measures | Outcome Measures |
|---|---|---|---|---|---|---|---|
| | EXPEN. | INC. | | | | | |
| Administrative Services | | | | | | | |
| User Services | | | | | | HEGIS | |
| Technical/ Production Services | | | | | HEGIS LIBGIS ARL | | |
| Instructional Services | | | | | | | |
| Support Services | | | | | | | |
| TOTALS | HEGIS LIBGIS ARL | LIBGIS | HEGIS LIBGIS ARL | LIBGIS | HEGIS LIBGIS ARL | HEGIS | |

Throughout the two documents the Level 1 categories of programmatic activities have been generally recommended for use by the individual library. There are instances in which Level 2 categories are more appropriate or may be desired by the reporting library. The Level 1 and 2 definitions of programmatic activities--applicable in each section of the document--are presented on the following pages.

ADMINISTRATIVE SERVICES: Those activities related to the provision of general administrative services for the operation of the library. Specific services included are personnel administration, public relations, fiscal management, planning, program management, publications, advertising and exhibits, and building supervision. Computing support for general library activities and administrative functions should be included in this category. Excluded are those computer services in support of user or technical services. Activities related to "Information Dissemination/Production" are included in this activity category.

USER SERVICES: Those activities related to the provision of services to library patrons. Those specific activities included in this category are reference services, interlibrary loan services, equipment loan and rental services, messenger services, and information services. Also included in this category are computer services in support of user services, e.g., circulation, reference services; services and aids for their identification and location, e.g., indexes, catalogs; and activities related to control and distribution of library services.

A further breakdown of services which may be appropriate for some libraries include the following:

Materials Distribution: Those activities related to the physical control and circulation of library materials. Also included are lending library resources to direct borrowers, maintaining loan records, monitoring and collecting overdues, renewing materials, reshelving materials, and equipment rental for use in reading or viewing library materials.

Materials Identification and Access Services: Those activities related to the provision of services and aids for the identification and location of documents and materials. Included in this category are literature searches, production of bibliographies for specific subjects, processing reference and information queries, and maintenance of reference collections. Excluded are library tours that are part of the library's public relations activities and should be included in "administrative services."

Interinstitutional Exchange and Loan Services: Those activities related to the borrowing or lending of materials to other libraries. Specifically included activities are interlibrary loan and messenger services, record maintenance and accounting activities associated with interlibrary transactions, bulk loans to other libraries (excluding branches), and photocopying and reproducing materials for purposes of giving materials to another library in lieu of lending originals. Messenger services employed primarily for the pruposes of interbranch transactions are excluded from this category and should be included in "support activities."

TECHNICAL SERVICES: Those activities related to the provision of technical and production services of the library, specifically, material acquisition and preparation services. Included in this category are acquisition services, cataloging, periodicals control, and binding and repair services. Also included are activities related to the determination of an acquisition policy, screening and evaluation of library materials, and the selection process.

A further breakdown of technical services that may be appropriate for some libraries includes the following:

Materials Acquisition: Those activities related to the determination of acquisition policy, screening and evaluation of available materials, and the process of acquiring materials for libraries.

Materials Preparation: Those activities related to the organization, preparation, and maintenance of materials for general library use and distribution. Included in this category are cataloging, bibliographic searching, serials check-in, catalog card production, binding and repair services, initial shelving of new additions, catalog maintenance, and filing into catalogs. Reshelving should not be included in this category but should be included under material distribution or material access of user services.

SUPPORT SERVICES: Those activities related to the provision of general support activities of the library. Included are activities relating to building maintenance, custodial services, utilities, landscape and ground maintenance, major repairs and renovation, and construction planning.

INSTRUCTIONAL SERVICES: Those activities carried out for the express purpose of eliciting some measure of "educational change" in a learner or group of learners. "Educational change" is defined to include (1) the acquisition of an improved understanding of some portion of a body of knowledge; (2) the adoption of new or different attitudes and (3) the acquisition or increased mastery of a skill or set of skills. Included are the credit and non-credit courses or programs of instruction of the library. Examples are "right to read" programs of instruction, offerings in citizenship, current events/community action, research methods courses, and so forth.

Unedited drafts of these documents have been sent to each member of the advisory board for review. Additions, changes, and suggestions provided by the board will be carefully considered and incorporated into the structure.

(2) and (3) Test Sites for Academic and Public Libraries.

As was mentioned in the First Quarterly Report on the Statistical Data Base Project, we were fortunate to have developed an association with Dr. Scott Bruntjen, Shippensburg State College in Shippensburg, Pennsylvania. Dr. Bruntjen has submitted a proposal the goal of which is to:

> ...conduct a review, analysis, and field evaluation of the phase one work of the WILCO system. It will provide for the development of standard data that are necessary for Pennsylvania academic libraries and for the library profession in general. As a by-product, it will produce the first resource allocation--outcome use of the new NCHEMS budget system now employed by the Pennsylvania state colleges and university.

In addition to the Pennsylvania state colleges test site, presently the possibility of incorporating the Statistical Data Base system into a project conducted by the Oklahoma State Library for public libraries within the state is being investigated. Discussions on this aspect of the project have only recently been initiated.

## VIII. RELATED ACTIVITIES

### A. Site Visit

On November 17, 1976, Mr. Lawrence Papier, Program Officer, Library Research and Demonstration Branch, Washington, D. C. came to WICHE-WILCO for a site visit. The combined staffs of WILCO and NCHEMS met with Mr. Papier for a full day. (APPENDIX B) Discussions revolved around the major activities and accomplishment which had taken place during the first quarter ahd delineation of those tasks still remaining. Briefly, those items covered during the site visit were as follows:

(1) National Advisory Board. Members of this board were selected on the basis of their knowledge of and responsibility for library statistics. It was decided that other outstanding members of the library profession be invited to assist the advisory board in the review and evaluation of the project from time to time. Consideration was also given to the prospect of adding members to the advisory board to enhance its national characteristics.

(2) Major Research Universities Task Force. Over a five-year period NCHEMS developed a set of Information Exchange Procedures (IEP) that generalize across institutions. However, it was felt that the problems of major research universities were unique and not adequately addressed. In response to these circumstances, an ad hoc committee of representatives from the major research universities convened to identify and discuss the specific problems of these universities. The result of the meeting was a project to develop a set of exchange procedures for major research university administrators to assist them in carrying out their "planning and management responsibilities." One of the pertinent problems identified by this task force was the need for a more intense concentration on the libraries of the major universities.

Through Dr. James Topping and his assistant Mr. Ed Myers, liaison was established with the Major Universities Task Force. The tentative plan is to incorporate the Statistical Data Base project findings into the Major Universities Task Force testing activities. By implementing this procedure the project staff expects to measure the reliability of the data base system and the applicability of Program Elements and Outcomes. It is expected that further refinement will be necessary after completion of this testing. The Major Research Universities Task Force hopes to test the Information Exchange Procedures package (including the library module) in 1977.

(3) Problems. The project staff proposed the following minor modification. It was suggested that no extended data collection activities be attempted because of duplication in the collection of library statistics and the growing resistance to completing survey instruments. Instead, the staff would rely on volunteer testing in Pennsylvania and on available data already collected by HEGIS, LIBGIS, and the Cost and Funding Project just completed by the WILCO staff. The modification was approved on the basis that the cost for extending the advisory committee membership was equivalent to the savings that would result if the extended data collection were not performed.

Regarding the pilot test at Shippensburg, the consensus was that this test appeared to be a far more desirable and useful evaluation of performance and outcome measures being developed by the project staff than a mail survey at essentially no cost to the project. Since these modifications did not constitute a major change in direction or scope of the project, they were approved and accepted.

(4) The greater part of the discussion was given over to the NCHEMS Program Classification Structure Framework (APPENDIX C). The two levels of the Program Classification Structure, Academic Support (4.0) and Libraries Subprogram (4.1) were presented and examined in minute detail.

The rationale and purpose of the structure as defined in publications of the NCHEMS staff, the program structure nomenclature, Program Measures, and Outcome Measures were clearly defined by members of both the NCHEMS and WILCO staffs.

(5) Finally, the roles to be assumed in the project by both the Shippensburg State College and the CASC (Council for the Advancement of Small Colleges) Research and Management Project Task Force were discussed and clarified.

B. Reference Statistics Study

Katherine Emerson, Chairperson of the Statistics Coordinating Committee, Library Organization and Management Section, Library Administration Division of ALA, has recently joined the Advisory Committee for this project. The Statistics Coordinating Committee is organized:

> To supervise and coordinate the work of the individual statistics committees; to work with other organizations, agencies, and associations in planning and advising in areas of library statistical concerns; to recommend and/or conduct research into statistical needs;...

Ms. Emerson and Barbara Slanker of the ALA Office of Research (and also a member of the project's Advisory Committee) have explored the possibility of incorporating a reference statistics study into the Statistical Data Base project. In their discussions with project staff and with Candace Morgan, Chairman of the Reference Statistics Committee of ALA, it has been tentatively agreed that this project will address reference statistics requirements and further refine the reference module of the data base structure.

## IX. DISSEMINATION ACTIVITIES

The Second Quarterly Report was sent to each member of the

- Western Council of State Librarians, governing board of the Western Interstate Library Coordinating Organization,
- Advisory Board, and to
- Larry Papier, Project Officer, U. S. Office of Education.

A complete list of individuals to whom this report was mailed can be found in APPENDIX E.

On Sunday, January 30th, from 9:00 to 9:30 PM, an overview of the project will be presented before a Statistics Coordinating Committee of ALA.

## X. STAFF UTILIZATION

Two staff changes have taken place since the First Quarterly Report was submitted. Dennis Jones assumed the position of Project Director/Principal Investigator, and Research Assistant, Ed Myers has joined the Statistical Data Base staff as a .25 F.T.E. This addition to the staff had been contemplated and was discussed in the First Quarterly Report. On January 31, Dr. Bernice McKibben will leave the project as a consultant. Her assistance to this project has been invaluable.

## XI. ACTIVITIES PLANNED FOR THE NEXT REPORTING PERIOD

For the next reporting period, the following specific tasks are to be accomplished:

- continue search for and compilation of data elements
- continue development and compilation of standard definitions of terms
- continue updating the Dictionary of Data Elements and Standard Definitions of Terms
- continue search for and compilation of Outcome Measures
- continue development of NCHEMS Libraries Subprogram Model
- complete bibliography
- meet with the national Advisory Committee for progress review
- produce the Third Quarterly Report.

## XII. FINANCIAL REPORT

The financial report for the period November 1, 1976 to December 31, 1976, appears in APPENDIX D. The original proposal anticipated a total expenditure of $29,500 through the second quarter of the project. Expenditures to date indicate that the project is essentially on target.

APPENDIX A

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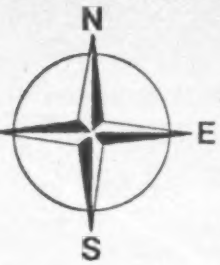
APPENDIX B

SITE VISIT

Western Interstate Library Coordinating Organization

# WILCO




SITE VISIT AGENDA
November 17, 1976
WICHE Headquarters, 1540 30th Street
NCHEMS Conference Room

9:00 WILCO Overview

9:45 NCHEMS Overview

10:30 Break

10:45 Project Overview

11:45 Lunch

1:30
- Review Advisory Committee purpose and first meeting agenda.
- Meeting with Rouse and Hubbard and activities of CASC (Council for Advancement of Academic Small Colleges).
- Test site in Pennsylvania.
- Test site in major academic institutions.
- Composite dictionary of data elements and standard definitions.
- Outcome measures - scope and definition
- Project timetable
- Project outcomes
- Follow-on proposal

4:00 Adjourn

PARTICIPANTS

Mr. Larry Papier, Program Officer

WILCO STAFF
Eleanor Montague, Program Director
Karl Pearson, Technical Coordinator
Maryann Kevin Brown, Senior Staff Associate
Anita McHugh, Staff Assistant
Bernice McKibben, WICHE Intern

NCHEMS STAFF
Dennis P. Jones, Associate Director
James Topping, Senior Staff Associate
Edward Myers, Research Associate



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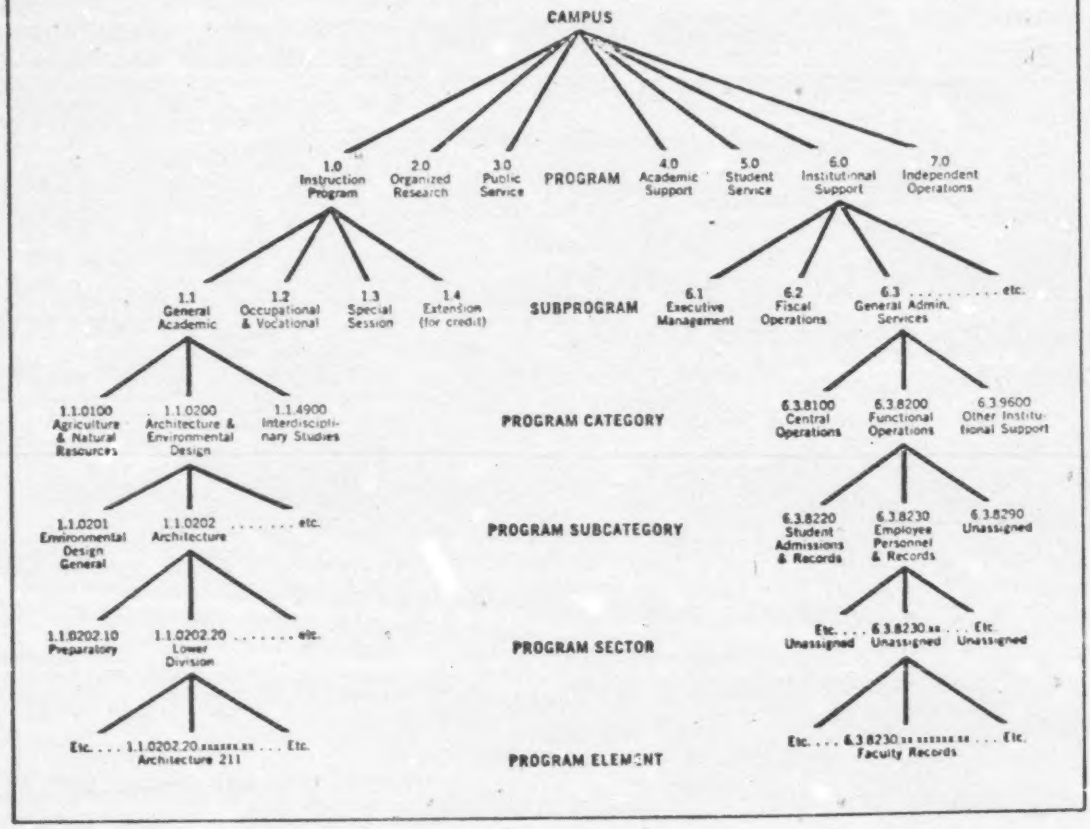
APPENDIX C

NCHEMS PROGRAM CLASSIFICATION STRUCTURE

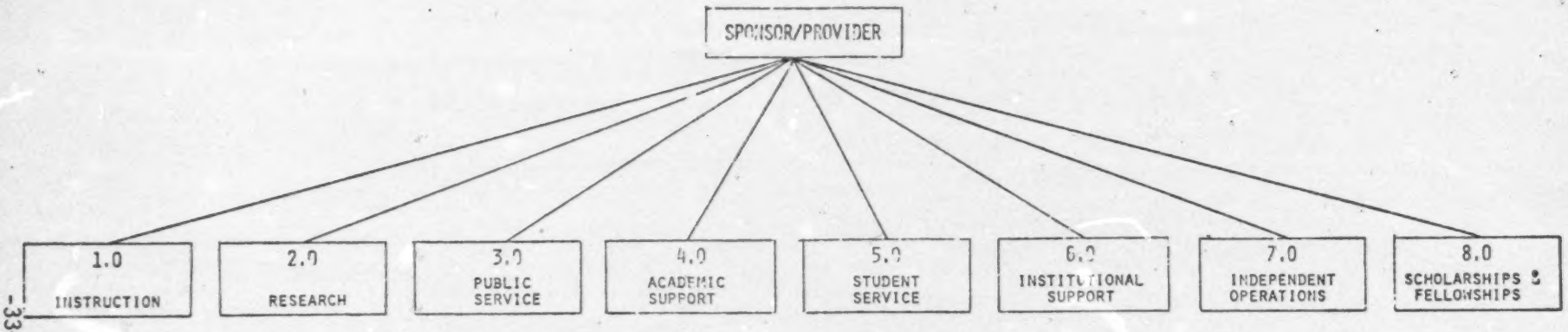
# Program Classification Structure Nomenclature

Figure 2.1. Program Classification Structure nomenclature


CAMPUS
1.0 Instruction Program
2.0 Organized Research
3.0 Public Service
PROGRAM
4.0 Academic Support
5.0 Student Service
6.0 Institutional Support
7.0 Independent Operations
1.1 General Academic
1.2 Occupational & Vocational
1.3 Special Session
1.4 Extension (for credit)
SUBPROGRAM
6.1 Executive Management
6.2 Fiscal Operations
6.3 . . . . . etc.
General Admin. Services
1.1.0100 Agriculture & Natural Resources
1.1.0200 Architecture & Environmental Design
1.1.4900 Interdisciplinary Studies
PROGRAM CATEGORY
6.3.8100 Central Operations
6.3.8200 Functional Operations
6.3.9600 Other Institutional Support
1.1.0201 Environmental Design General
1.1.0202 . . . . . etc. Architecture
PROGRAM SUBCATEGORY
6.3.8220 Student Admissions & Records
6.3.8230 Employee Personnel & Records
6.3.8290 Unassigned
1.1.0202.10 Preparatory
1.1.0202.20 . . . . . etc. Lower Division
PROGRAM SECTOR
Etc. . . . 6.3.8230.xx . . . Etc. Unassigned
Etc. . . . 1.1.0202.20.xxxxxx.xx . . . Etc. Architecture 211
PROGRAM ELEMENT
Etc. . . . 6.3.8230.xx.xxxxxx.xx . . . Etc. Faculty Records

REVISED

PROGRAM CLASSIFICATION STRUCTURE






1.1 General Studies Instruction-For Credit
1.2 Occupational and Career Instruction-For Credit
1.3 Public Affairs/ Citizenship Instruction-For Credit
1.4 Personal Development Instruction-For Credit
1.5 General Studies Instruction-Not For Credit
1.6 Occupational and Career Instruction-Not-For-Credit
1.7 Public Affairs/ Citizenship Instruction-Not-For-Credit
1.8 Personal Development Instruction-Not-For-Credit
1.9 Requisite Preparatory/Remedial Instruction

2.1 Institutes and Research Centers
2.2 Individual or Project Research

3.1 Direct Patient Care
3.2 Health Care Support Services
3.3 Community Services
3.4 Cooperative Extension Services
3.5 Public Broadcasting Services

4.1 Libraries
4.2 Museums and Gallaries
4.3 Educational Media Services
4.4 Computing Support
4.5 Ancillary Support
4.6 Academic Administration
4.7 Course and Curriculum Development
4.8 Academic Personnel Development

5.1 Student Service Administration
5.2 Social and Cultural Development
5.3 Counseling and Career Guidance
5.4 Financial Aid Administration
5.5 Student Auxiliary Services
5.6 Intercollegiate Athletics

6.1 Executive Management
6.2 Financial Management & Operations
6.3 General Administrative Services
6.4 Logistics & Related Services
6.5 Physical Plant Operation
6.6 Faculty & Staff Auxiliary Services
6.7 Public Relations and Development
6.8 Student Recruitment, Admissions & Records

7.1 Independent Operations/ Institutional
7.2 Independent Operations/ Outside Agencies

8.1 Scholarships
8.2 Fellowships

GENERAL FRAMEWORK OF PROGRAM MEASURES

| PROGRAM CLASSIFICATION STRUCTURE CATEGORIES | PROGRAM MEASURES | | | | | |
|---|---|---|---|---|---|---|
| | +HEFM CATEGORIES | MANPOWER | FACILITIES | ACTIVITIES | TARGET GROUP | OUTCOMES |
| Information Dissemination Production | | | | | | |
| Inter Institution | | | | | | |
| Materials Acquisition | | | | | | |
| Materials Distribution | | | | | | |
| Materials Identification Access Service | | | | | | |
| Materials Preparation | | | | | | |
| | | | | | | |

*Preliminary matrix provided by Ed Myers.

+Higher Education Finance Manual

Model from NCHEMS
Technical Report 50, p. 10.

APPENDIX D

FINANCIAL REPORT

## SUMMARY BUDGET AND EXPENDITURES THROUGH DECEMBER 31, 1976

| | Budget | Total Previously Reported | Expenditures this Quarter | Total Expenditures through 12/31/76 | Unexpended Balance |
|---|---|---|---|---|---|
| USOE | | | | | |
| Salaries | $28,839.00 | $2,521.02 | $ 5,676.14 | $ 8,197.16 | $20,641.84 |
| Benefits | 4,038.00 | 511.93 | 1,135.92 | 1,647.85 | 2,390.15 |
| Consultants, Advisory Board & Evaluator | 10,620.00 | -0- | 1,810.35 | 1,810.35 | 8,809.65 |
| Staff Travel | 2,400.00 | -0- | 20.00 | 20.00 | 2,380.00 |
| Communications | 1,410.00 | -0- | 11.49 | 11.49 | 1,398.51 |
| Computer | 2,675.00 | -0- | -0- | -0- | 2,675.00 |
| Indirect Cost | 9,018.00 | -0- | 2,700.49 | 2,700.49 | 6,317.51 |
| Total USOE | $59,000.00 | $3,032.95 | $11,354.39 | $14,387.34 | $44,612.66 |
| WICHE Matching Funds | | | | | |
| Direct Costs | $13,503.00 | | | | $12,745.25 |
| Rent | | | $ 339.50 | $ 339.50 | |
| Supplies | | | 5.20 | 5.20 | |
| Copying | | | 14.51 | 14.51 | |
| Publications | | | 214.24 | 214.24 | |
| Other Expense | | | 184.30 | 184.30 | |
| Indirect Cost | 4,225.00 | | 1,291.66 | 1,291.66 | 2,933.34 |
| Total WICHE | $17,728.00 | | $2,049.41 | $2,049.41 | $15,678.59 |

APPENDIX E

DISTRIBUTION LIST

## RECORD OF DISTRIBUTION OF THIS REPORT

Total Number of copies printed: 150

One copy was sent to each of the following except where otherwise indicated.

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Anne Marie Falsone, Colorado
Helen Miller, Idaho
Alma Jacobs, Montana
Joseph Anderson, Nevada
Marcia Lowell, Oregon
H. Vince Anderson, South Dakota
Roderick Swartz, Washington

Advisory Committee Members (10)

Robert Burns, Librarian for Research and Development, Colorado State University, Fort Collins

Ronald Dubberly, City Librarian, Seattle, Washington

Katherine Emerson, Archivist, University of Massachusetts, Amherst

Anne Marie Falsone, Deputy State Librarian, Colorado State Library, Denver

Harold Olsen, Associate Librarian, Oberlin College, Oberlin, Ohio

Vernon Palmour, Library Consultant, Vienna, Virginia

Frank Schick, National Center for Education Statistics, Education Division, Washington

Donald Simpson, Director, Bibliographical Center for Research, Denver

Barbara Slanker, American Library Association, Office of Research, Chicago

Duane Webster, Association of Research Libraries, Washington.

U. S. Office of Education (6)

Lawrence Papier, Program Officer, Washington, D. C.

Project Participants (5)

Scott Bruntjen, Shippensburg State College, Pennsylvania
Willis Hubbard, Eureka College, Illinois
William Williams, Wyoming State Librarian
Candace Morgan, Illinois State Library, Springfield
Eleanor Montague, University of California, Riverside

National Center for Higher Education Management Systems (NCHEMS) (7)

Dennis Jones
James Topping
Ed Myers
Ben Lawrence
Maryann Kevin Brown
Anita McHugh
Bernice McKibben

Western Interstate Library Coordinating Organization (WILCO) (1)

Karl Pearson, Director

Others (13)

Alphonse Trezza, Executive Director, NCLIS

Henriette Avram, Chief, MARC Development Office, Library of Congress

Charles H. Stevens, Executive Director, SOLINET, Atlanta

William Dempsey, Office of Analytical Studies and Long Range Planning, Plattsburgh, N.Y.

Lynn La Brake, Cornell University Libraries, Ithaca, N.Y.

Emily A. Copeland, Black Resources Information Coordinating Services, Inc., Tallahassee

Barbara E. Markuson, Indiana Cooperative Library Services Authority, Indianapolis

Peter Graham, Research Libraries Group, Branford, Conn.

Miriam A. Drake, Purdue University Libraries, West Lafayette

Glyn T. Evans, Director of Library Services, SUNY, Albany, N.Y.

Neal K. Kaske, University of California, Berkeley

Michael Cooper, School of Librarianship, Berkeley

William E. McGrath, University of Southwestern Louisiana Libraries, Lafayette, LA